REMARKS

Applicants appreciate the thoroughness with which the Examiner has examined the above-identified application and the indication of allowable subject matter with respect to claims 4-10, 12, 13, 15-17, 19 and 20. With respect to the six rejected claims (1-3, 11, 14 and 18) reconsideration is respectfully requested in view of the remarks below.

Rejection under 35 USC § 102

Claims 1-3 and 11 stand rejected under 35 USC § 102(e) as being anticipated by Frolov et al. U.S. Patent No. 6,715,225. Applicant respectfully traverses this rejection.

Frolov et al. discloses an illuminated exit bar that incorporates "an array of light sources" that illuminate "light transmissive openings in the form of exit instructions." See the Abstract and column 2 lines 14-29.

The "array of light sources" are disclosed to be "a plurality of light emitting diodes (LEDs) arranged on a printed circuit board" column 2 lines 21-24. A light conduction plastic comprising an "exit insert" channels light from the PC board to the desired location to illuminate all or part of the "exit instructions." As described at column 5 line 1, "the light transmissive properties of the exit insert 24 serve to collect light generated ... and conduct it to the push face."

Claim 1 of the present application is directed to an invention that is neither described nor suggested by the device in Frolov et al. Specifically, claim 1 is directed to an exit device that uses a "planar electroluminescent illuminator." This differs in two fundamental ways from the "LED" light sources disclosed in Frolov et al.

LEDs are not "planar" light sources, as claimed in all claims of the present invention. LEDs are point light sources. Frolov's design must use up to three separate "arrays" of LEDs and a specially shaped "exit insert" with "light transmissive properties" in order to "conduct" the light from the arrays of LEDs to the desired area to be illuminated. In order to power the multiple non-planar LEDs, Frolov must provide a "printed circuit board" and mount the LEDs in desired locations thereon.

The present invention does not need even one "array." It uses only a single planar illuminator. The present invention does not need a specially shaped "exit insert" with "light transmissive properties" in order to "conduct" the light from the LEDs to the desired area to be illuminated. It does not need a "printed circuit board" to hold arrays of LEDs in predetermined positions. The "planar electroluminescent illuminator" of the present invention provides true "planar" illumination to uniformly illuminate the exit instructions.

The second key difference between the LEDs of Frolov et al. and the claimed illuminator of the present invention is that LED's are not an "electroluminescent illuminator" as claimed. LEDs are always made with semiconductor materials and produce light at a semiconductor diode junction. "Electroluminescent" devices are not made with, and do not require, semiconductor materials. They operate by distinctly

different physical principles. The term "electroluminescent" is a term describing a particular category of lighting that excludes semiconductor LEDs, as well as incandescent, fluorescent and other types of prior art illuminators.

Electroluminescent illuminators are made from materials that directly convert particular types of electrical energy to light. In a planar electroluminescent illuminator, the electroluminescent material selected is formed into a plane, which is then electrically excited with electrodes that are also typically planar. The electrodes are appropriately designed and positioned to uniformly excite the electroluminescent material.

The use of a planar electroluminescent illuminator provides several advantages over other types of illumination, such as LEDs. It is thinner, provides more uniform illumination and is less expensive to produce or replace than a configured array of LEDs on a printed circuit board. An electroluminescent illuminator allows different signs to be quickly created and installed, perhaps in different languages, without concern as to whether an array of LEDs optimized for a previous sign will properly illuminate new letters of a new sign.

On the other hand, an electroluminescent illuminator also has certain disadvantages, such as the necessity to operate at high voltage in a metal device that will be touched by the public. The present application describes and claims the solution to such problems, as well as describing the new invention that uses an electroluminescent illuminator.

Accordingly, one of skill in the art who was familiar with the point source LED design of Frolov et al. would not have been able to perform a simple substitution of light sources, even if the option of an electroluminescent illuminator had been considered. The applicant submits that such an option would not have been considered without hindsight reference to the present invention.

Rejection under 35 USC § 103

Claims 14 and 18 stand rejected under 35 USC § 103 as being obvious over Frolov et al. in view of Parra (United States Patent No. 6,111,370). Applicant respectfully traverses this rejection.

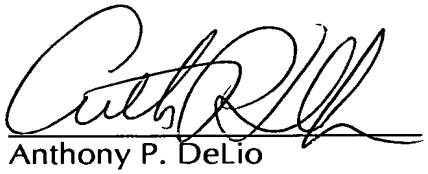
Parra discloses a "high-efficiency gas discharge signage" including an inverter that operates an exit sign. At column 3, line 1, it states: The system of [Parra's] invention uses a square wave AC inverter circuit to drive the electrodes of a fluorescent tube mounted in an exit sign." As in the case of the LEDs of Frolov et al., the illuminator of Parra ("gas discharge") is not an "electroluminescent illuminator" and is not "planar." Parra's illuminator is an "FT6 fluorescent tube" (see Fig. 2). "Fluorescent" illumination is not "electroluminescent" illumination and "gas discharge" tubes are not "planar."

Fluorescent tubes may be excited with an inverter at high frequency to improve performance, as disclosed in Parra. However, because the physics of electroluminescence (as used in the present invention's illuminator) differ so greatly from the physics of fluorescence (as used in the gas discharge tubes of Parra), there is

nothing in Parra's disclosure that can be applied to the planar electroluminescent design of the present invention. One of skill in the illumination arts would not have considered the teaching of Parra about using inverters to excite a gas in a fluorescent tube to be relevant or applicable to exciting an electroluminescent material.

It is respectfully submitted that the application has now been brought into a condition where allowance of the entire case is proper. Reconsideration and issuance of a notice of allowance are respectfully solicited.

Respectfully submitted,



Anthony P. DeLio
Reg. No. 18,729

DeLIO & PETERSON, LLC
121 Whitney Avenue
New Haven, CT 06510-1241
(203) 787-0595

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Name: Carol M. Thomas Date: March 16, 2005 Signature: